

LISTING OF THE CLAIMS

1. -35. (Canceled)

36. (New) A thermal cycling device, comprising:

a sample block assembly;

an optical detection system; and

a sample well tray holder including a tray-receiving region configured to hold a sample well tray,

wherein the sample block assembly and sample well tray holder are independently translatable to position a sample well tray into alignment with the optical detection system.

37. (New) The thermal cycling device of claim 36, wherein the optical detection system is adapted to remain substantially stationary during insertion and removal of the sample well tray from the thermal cycling device.

38. (New) The thermal cycling device of claim 36, wherein the sample block assembly comprises a sample block for contacting the sample well tray.

39. (New) The thermal cycling device of claim 38, further comprising a positioning mechanism configured to translate the sample block.

40. (New) The thermal cycling device of claim 39, wherein the positioning mechanism comprises a plurality of links.

41. (New) The thermal cycling device of claim 40, wherein the positioning mechanism comprises a motor to rotate the plurality of links.

42. (New) The thermal cycling device of claim 36, wherein the thermal cycling device is a real-time PCR machine.

43. (New) A method of performing nucleic acid amplification on a plurality of biological samples positioned in a sample well tray in a thermal cycling device, comprising:

placing the sample well tray onto a tray-receiving region of a sample well tray holder;
independently translating the sample well tray holder and a sample block assembly to engage the sample well tray to the sample block assembly and to align the sample well tray with an optical detection system; and
thermally cycling the device.

44. (New) The method of performing nucleic acid amplification of claim 43, further comprising:

maintaining the optical detection system substantially stationary.